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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MINTZ, LEVIN, COHN, FERRIS, GLOVSKY & POPEO, P.C.

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ONE FINANCIAL CENTER

BOSTON, MA 02111

EXAMINER

RICEK, JASON D

ART UNIT

PAPER NUMBER

2142

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DELIVERY MODE

06/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/720,669

Applicant(s)

SINGH ET AL.

Examiner

JASON RECEK

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to the amendment filed on February 28th 2008 which concerns application 10/720669.

Status of Claims

Claims 1-20 are rejected under 35 U.S.C. 103(a).

Response to Arguments

1. Applicant's arguments, see pg. 18-19, filed 2/28/08, with respect to the drawing objections, specification objections, claim objections and 112 rejections have been fully considered and are persuasive. All of the above been withdrawn.
2. Applicant's arguments with respect to the rejection(s) of claim(s) 1-6, 8-16 and 18-20 under 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Multer and Crozier U.S. 5,392,390. See below for a detailed explanation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 8-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Multer et al. US 6,694,336 B1 in view of Crozier US 5,392,390.

Regarding claim 1, Multer discloses "A *method of synchronizing data objects between a first platform and a second platform comprising*" as "a method for transferring data between two devices which require information to be shared between them," (col. 4, line 65) and states more specifically that the intention is to synchronize information between multiple computing systems (col. 5, line 26). Multer discloses "creating a set of generic messages identifying changes to the data objects since a previous synchronization" as a set of self-describing synchronization transactions (col. 12, line 10) that identify changes, i.e. what has been added, deleted, and/or modified (col. 17, line 46), to the data on the first system when compared to the data it knows the 2nd system contains (col. 6, line 8). The vendor-specific application data is converted to a generic or universal format before changes are calculated and transactions are logged (col. 17, line 37). Multer discloses "converting the generic messages to adapted messages" as the conversion of the extracted changes into "difference information A" which contains the changes and implementation instructions for the second platform

(col. 5, line 60). Multer discloses "sending the adapted messages from the first platform to the second platform" as the next step in the process, which is to transmit the difference information to the second system (col. 6, line 29). Multer discloses "converting the adapted messages to generic messages on the second platform" as the step in which the difference information, having been received by the second system, is interpreted and its data is reconstructed on the second system (col. 6, line 13). Multer discloses "updating the data objects on the second platform using the generic messages" as the step in which the second system uses the reconstructed data from the first system to update its own data (col. 6, line 3).

Multer does not explicitly disclose "the data objects on the second platform being updated based on stored mapping data, the stored mapping data being generated via user-generated input manipulating a mapping chart illustrating a mapping of variables from data objects on the first platform to data objects on the second platform" however this is taught by Crozier as a user mapping data field between computer platforms (abstract, col. 3 ln. 5-9, col. 8 ln. 1-10, Fig. 5a). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Multer with the data mapping taught by Crozier for the purpose of solving data translation problems. Multer suggests that by having a user map data fields two or more applications can interact that otherwise would not be able to (col. 3 ln. 66 - col. 4 ln. 2).

Regarding claim 2, Multer discloses, "*The method of claim 1, wherein creating the set of generic messages includes: fetching the data objects from an application in the first platform*" as a step occurring on the first platform in which application data is gathered and converted to a universal data format (col. 12, line 13). Multer discloses "*comparing the fetched data objects in the first platform with a replica of the data objects in the second platform to identify changes*" as the comparison of the converted application data to "a copy of the device's data at a point just after the previous data extraction and synchronization occurred" contained in an application object store (col. 11, line 59) in order to determine what changes have been made (col. 12, line 1).

Regarding claim 3, Multer discloses, "*The method of claim 2, wherein fetching the data objects from an application in the first platform includes: selecting data objects to be fetched,*" as a step in which the data structure containing the data to be transmitted to the second system is "specified" (col 5, line 57). Further, Multer discloses filtering capabilities to allow for the selection of data based on a field's contents or value (col. 12, line 66) as well as FastSync capabilities that allow synchronization of only application objects that are FastSync compatible. Multer discloses "*fetching only the selected data objects*" as a step in which the first system extracts the information from the "specified" data structure (col 5, line 58). Since synchronization occurs by first extracting application data to be synchronized and then calculating changes made since the last synchronization, as already discussed, then the selection of a specific data

structure or the limitation of application objects to be synchronized inherently results in the retrieval of the only selected application data.

Regarding claim 4, Multer discloses, *"The method of claim 2, further including categorizing the data objects associated with the first platform into a first category and a second category,"* as a feature of the universal data format discussed above, where this data format includes information "which allows the classification of items and consequently their associated item fields into particular categories," (col. 40, line 25). Multer also discloses the capability of creating collections of data based on whatever arbitrary criteria the user wants to use (col. 27, line 65).

Regarding claim 5, Multer discloses *"The method of claim 4, further including wherein creating the generic messages includes: generating generic messages for only the first category of data objects,"* as the ability of a trigger event to only trigger synchronization of a particular application type (col. 36, line 32). Multer also discloses that a user can make a collection and then synchronize that collection (col. 28, line 1). Given that synchronization is accomplished by generating difference information as previously discussed, the selection of a subset of data for synchronization inherently includes the generation of difference information only for the selected subset.

Regarding claim 6, Multer discloses *"The method of claim 2, further including: grouping the data objects associated with the first platform into a first transaction group and a second transaction group,"* as the grouping of changes based on the data they are related to, and then packaging each group individually (col. 41, line 24).

Regarding claim 8, Multer discloses *"The method of claim 1, wherein converting the generic messages to adapted messages includes converting the generic messages to adapted messages based on the requirements of an underlying synchronization software,"* as the packaging of difference information in a format understood by the differencing synchronizer such that it is able to transmit and reconstruct the original data (col. 6, line 27).

Regarding claim 9, Multer discloses *"The method of claim 1, wherein sending the adapted messages from the first platform to the second platform includes sending the adapted messages using an underlying synchronization software,"* as a function of the differencing synchronizer as discussed in the above analysis of claim 8. Further, Multer states "the invention comprises a set of programs specifically designed to transmit and/or receive differencing data from one device to another device, irrespective of the type of file system, data, content, or system hardware configuration (col. 5, line 17).

Regarding claim 10, Multer discloses "The *method of claim 1, wherein updating the data objects on the second platform using the generic messages includes executing the generic messages so that they act on the data objects of the second platform,*" as the implementation of the reconstructed difference information on the data of the second system (col. 5, line 61). Further, Multer discusses the use of a device engine that "performs mapping and translation steps necessary for applying the data packages to the local format required for that type of information in the application data stores" (col. 11, line 11).

Regarding claim 11, it is a system claim that corresponds to the method of claim 1, therefore the corresponding parts are rejected for similar reasons. Claim 11 also introduces the new limitations "the generic messages having a first format" and "the adapted messages having a second format different than the first format". Multer discloses that the messages have different formats by using the word "convert" when describing translating the messages from the first platform to the second platform (col. 5 ln. 60-61). When information is converted into a different type then its format has changed. One of ordinary skill in the art would understand Multer to mean the messages or files change formats (conversion). Since the formats change there is more than one format which means the second format is different than the first format.

Regarding claims 12-16 and 18-19 they are system claims that correspond to the method claims 2-6 and 8-9 respectively, therefore they are rejected for similar reasons.

Regarding claim 20, Multer discloses *"A system for synchronizing data objects for a user between a primary platform and a plurality of auxiliary platforms comprising,"* as *"a system [...] for transferring data between two devices which require information to be shared between them,"* (col. 4, line 65) and states more specifically that the intention is to synchronize information between multiple computing systems (col. 5, line 1-2, 26-28). Multer discloses *"a memory"* and *"processing means, coupled to the memory, to execute at least one computer program"* as components of a device to be synchronized (col. 5, line 6) where the system *"comprises a set of programs specifically designed to transmit and/or receive differencing data from one device to another device"* (col. 5, line 17). Multer discloses *"creating a set of generic messages identifying changes to the data objects on the primary platform since a previous synchronization"* as a set of self-describing synchronization transactions (col. 12, line 10) that identify changes, i.e. what has been added, deleted, and/or modified (col. 17, line 46), to the data on the first system when compared to the data it knows the and system contains (col. 6, line 8). The vendor-specific application data is converted to a generic or universal format before changes are calculated and transactions are logged (col. 17, line 37). Multer discloses *"converting the generic messages to adapted messages for each of the auxiliary platforms"* as the conversion of the extracted changes into *"difference information A"* which contains the changes and implementation instructions for the second platform

(col. 5, line 60). Multer discloses *"sending the adapted messages from the primary platform to the corresponding auxiliary platforms"* as the next step in the process, which is to transmit the difference information to the second system (col. 6, line 29). Multer discloses *"converting the adapted messages to generic messages on each of the auxiliary platforms"* as the step in which the difference information, having been received by the second system, is interpreted and its data is reconstructed on the second system (col. 6, line 13). Multer discloses *"updating the data objects on the respective auxiliary platforms using the generic messages converted from the adapted messages"* as the step in which the second system uses the reconstructed data from the first system to update its own data (col. 6, line 3).

Multer does not explicitly disclose "accessing a database to obtain a user identifier, the user identifier being associated with the user and linking to one or more device identifiers, the device identifiers identifying the plurality of auxiliary platforms" however this is taught by Crozier as a user of a system having user data stored in a database (Fig. 3), and data which identifies devices (col. 8 ln. 40-45). Crozier also discloses that the user interface identifies devices for the user (Fig. 5) in order for the user to translate data between the devices. Thus Crozier discloses a user identifier and device identifiers and linking the two. Multer and Crozier do not explicitly disclose "converting the generic messages ... based on the obtained user identifier and the linked device identifiers" however this is would have been obvious to one of ordinary skill in the art at the time of the invention. Multer and Crozier both teach converting messages as discussed above, Crozier also teaches user and device identifiers. It

would have been obvious to modify Multer to considering the identifiers taught by Crozier for the purpose of tracking and customization. A user's or device's settings may be stored and then identified, this would lead to quicker converting of messages for that specific user or device. Such processes are well known in the art and yield predictable results.

5. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Multer and Crozier in view of Falls et al. US 5,991,771 (hereinafter referred to as Falls).

Regarding claim 7, Multer and Crozier disclose, *"The method of claim 6,"* as is discussed in the 103 analysis above, but do not explicitly disclose the remaining claim limitations; however, these additional limitations are disclosed by Falls. Falls discloses *"sending a failure notification from the second platform to the first platform if the update of one of the data object of the first transaction group on the second platform fails"* as an error indicator for transactions that is returned to the caller (col. 24, line 63), where the caller can be another system (col. 13, line 43). Falls also discloses, *"Each group of updates associated with a single transaction processor transaction identifier ('PTID') containing [...] a transaction sequence number,"* (col. 14, line 47). The PTID is used to determine if updates have been missed, one possible indication of an error (col. 15, line 48). Falls discloses *"rolling back all updating of data objects of the first transaction group on the second platform upon the failure notification,"* as a feature of transaction-

based synchronization, where an inconsistency found in the changes of a transaction will result in all related changes being discarded (col. 16, line 50). Further, Falls discloses the closing of a transaction causes all updates of that transaction to be applied, and specifies that either all updates are applied or none will be applied (col. 22, line 6). Background information, provided by Falls, tells us, "A transaction is a sequence of one or more operations which are applied to a replica on an all-or-nothing basis. Non-transactional approaches may allow partially completed update operations to create inconsistent internal states," (col. 2, line 25). Multer discloses an embodiment that includes a server that may maintain the transmitted difference information "to allow data on either System A or System B to be returned to a previous state," (col. 6, line 49) and provides difference information in packages, which are known to include the all-or-nothing characteristic described by Falls. Further, Multer discloses error messages (col. 21, line 35) and synchronization notification (col. 25, line 30) used by the delta generator and the application on the first system. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Multer and Crozier to include an error indicator, as disclosed by Falls, to notify the first system that the difference information was successfully transmitted and reconstructed, therefore updating the data objects of the second system. It would also be obvious to one skilled in the art to specify that data be returned to a previous state upon an error, as disclosed by Falls. Roll back features are generally known in the art and yield predictable results.

Regarding claim 17, it corresponds to claim 7 and is therefore rejected for similar reasons.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen et al. US 6,993,522 B2 discloses synchronizing data according to object and device identifiers.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON RECEK whose telephone number is (571)270-1975. The examiner can normally be reached on Mon - Thurs 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Recek/
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